WEST Search History

DATE: Thursday, August 29, 2002

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; PLUR=YES; OP=AND		
L22	l20 and L21	0	L22
L21	ken.in.	5377	L21
L20	mueller.in.	3359	L20
L19	l17 and L18	0	L19
L18	nick.in.	1110	L18
L17	ryba.in.	23	L17
L16	l7 and L15	1	L16
L15	l13 and L14	1	L15
L14	jon.in.	5363	L14
L13	adler.in.	700	L13
L12	elliot.in.	820	L12
L11	l7 and L10	1	L11
L10	l8 and L9	2	L10
L9	charles.in.	58808	L9
L8	zuker.in.	3	L8
L7	l5 or L6	7	L7
L6	L4 and polynucleotide	4	L6
L5	L4 and (nucleic adj acid)	7	L5
L4	L3 and (isolated or recombinant)	59	L4
L3	l1 and bitter	87	L3
L2	l1 and t2r	0	L2
L1	taste adj receptor	131	L1

END OF SEARCH HISTORY

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    * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 12:42:32 ON 29 AUG 2002

=> file medline caplus biosis

COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                          ENTRY     SESSION
FULL ESTIMATED COST                                        0.21        0.21

FILE 'MEDLINE' ENTERED AT 12:42:43 ON 29 AUG 2002

FILE 'CAPLUS' ENTERED AT 12:42:43 ON 29 AUG 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE 'BIOSIS' ENTERED AT 12:42:43 ON 29 AUG 2002
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=> taste receptor?

L1          2317 TASTE RECEPTOR?

=> l1 and t2r

L2            21 L1 AND T2R

=> l1 and bitter

L3           370 L1 AND BITTER

=> l3 and (isolat? or purif?)

L4            48 L3 AND (ISOLAT? OR PURIF?)

=> l3 and ?nucle?

L5            69 L3 AND ?NUCLE?

=> l4 and ?nucle?

L6             9 L4 AND ?NUCLE?

=> l2 and (isolat? or purif?)

L7             1 L2 AND (ISOLAT? OR PURIF?)

=> l7 and 1970-1999/py

L8             0 L7 AND 1970-1999/PY

=> l6 and 1970-1999/py

L9             7 L6 AND 1970-1999/PY

=> dup rem l9

PROCESSING COMPLETED FOR L9
L10            3 DUP REM L9 (4 DUPLICATES REMOVED)
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=> zuker?/au

L11 1394 ZUKER?/AU

=> charles?/au

L12 12352 CHARLES?/AU

=> l11 and l12

L13 0 L11 AND L12

=> adler?/au

L14 21496 ADLER?/AU

=> jon?/au

L15 243508 JON?/AU

=> l14 and l15

L16 165 L14 AND L15

=> l10 and l16

L17 0 L10 AND L16

=> ryba?/au

L18 11666 RYBA?/AU

=> nick?/au

L19 20814 NICK?/AU

=> l18 and l19

L20 0 L18 AND L19

=> mueller?/au

L21 89328 MUELLER?/AU

=> ken?/au

L22 122244 KEN?/AU

=> l21 and l22

L23 163 L21 AND L22

=> l10 and l23

L24 0 L10 AND L23

=> d ti abs so l10 1-3

L10 ANSWER 1 OF 3 MEDLINE DUPLICATE 1
TI Characterization and solubilization of **bitter**-responsive receptors that couple to gustducin.
AB The tastes of many **bitter** and sweet compounds are thought to be transduced via guanine **nucleotide** binding protein (G-protein)-coupled receptors, although the biochemical nature of these receptors is poorly understood at present. Gustducin, a taste-specific G-protein closely related to the transducins, is a key component in transducing the responses to compounds that humans equate with **bitter** and sweet. Rod transducin, which is also expressed in **taste receptor** cells, can be activated by the **bitter** compound denatonium in the presence of bovine taste membranes. In this paper, we show that gustducin is expressed in bovine taste tissue and that both gustducin and transducin, in the presence of bovine taste membranes, can be activated specifically by several **bitter** compounds, including denatonium, quinine, and strychnine. We also demonstrate that the activation in response to denatonium of gustducin by presumptive **bitter**-responsive receptors present in taste membranes depends on an interaction with the C terminus of gustducin and requires G-protein betagamma subunits to provide the receptor-interacting heterotrimer. The **taste receptor** -gustducin interaction can be competitively inhibited by peptides derived from the sites of interaction of rhodopsin and transducin. Finally, as the initial step toward **purifying taste receptors** , we have solubilized this **bitter**-responsive **taste receptor** and maintained its biological activity.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, **(1998 Jul 21)** 95 (15) 8933-8.
Journal code: 7505876. ISSN: 0027-8424.

L10 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Biochemical and transgenic analysis of gustducin's role in **bitter** and sweet transduction
AB It has been proposed that gustducin and transducin function in taste transduction in a manner similar to the way in which transducin functions in phototransduction. This model predicts that gustducin and/or transducin couple seven transmembrane-helix **taste receptors** to TRC (**taste receptor** cells) -specific PDEs (cGMP phosphodiesterases) to regulate intracellular cyclic **nucleotides** (cNMPs). To test this model, the authors set out to biochem. identify taste-specific proteins that might couple to gustducin or transducin and function in taste transduction. In this regard, the authors partially **purified** a taste-specific PDE activity from bovine taste tissue that could be stimulated by transducin, transducin-derived peptides, or gustducin. The authors also identified a **taste receptor** activity that, in the presence of the **bitter** compd. denatonium benzoate, activated transducin and gustducin but not Gi. These results suggest that gustducin/transducin couple **taste receptor**(s) to taste cell PDE. The authors further tested the hypothesis that gustducin mediates **bitter** transduction by generating .alpha.-gustducin-deficient transgenic mice and analyzing their taste responses. The mice are viable, healthy, and fertile, suggesting that .alpha.-gustducin is not required for normal development. As expected, behavioral tests demonstrated a difference between homozygous .alpha.-gustducin null mice and their wild type siblings in the aversion to two **bitter** compds.

Surprisingly, the .alpha.-gustducin null mice had diminished nerve responses to both **bitter** and sweet compds. These data provide clear in vivo evidence that gustducin plays a key role in both **bitter** and sweet taste transduction.

SO Cold Spring Harbor Symposia on Quantitative Biology (**1996**), 61(Function & Dysfunction in the Nervous System), 173-184
CODEN: CSHSAZ; ISSN: 0091-7451

L10 ANSWER 3 OF 3 MEDLINE DUPLICATE 2

TI Coupling of **bitter** receptor to phosphodiesterase through transducin in **taste receptor** cells.

AB The rod and cone transducins are specific G proteins originally thought to

be present only in photoreceptor cells of the vertebrate retina. Transducins convert light stimulation of photoreceptor opsins into activation of cyclic GMP phosphodiesterase (reviewed in refs. 5-7). A transducin-like G protein, gustducin, has been identified and cloned from rat taste cells. We report here that rod transducin is also present in vertebrate taste cells, where it specifically activates a phosphodiesterase **isolated** from taste tissue. Furthermore, the **bitter** compound denatonium in the presence of taste-cell membranes activates transducin but not Gi. A peptide that competitively inhibits rhodopsin activation of transducin also blocks taste-cell membrane activation of transducin, arguing for the involvement of a seven-transmembrane-helix G-protein-coupled receptor. These results suggest that rod transducin transduces **bitter** taste by coupling **taste receptor**(s) to taste-cell phosphodiesterase. Phosphodieterase-mediated degradation of cyclic **nucleotides** may lead to taste-cell depolarization through the recently identified cyclic-**nucleotide**-suppressible conductance.

SO NATURE, **(1995 Jul 6)** 376 (6535) 80-5.
Journal code: 0410462. ISSN: 0028-0836.

=> d his

(FILE 'HOME' ENTERED AT 12:42:32 ON 29 AUG 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS' ENTERED AT 12:42:43 ON 29 AUG 2002

L1	2317	TASTE RECEPTOR?
L2	21	L1 AND T2R
L3	370	L1 AND BITTER
L4	48	L3 AND (ISOLAT? OR PURIF?)
L5	69	L3 AND ?NUCLE?
L6	9	L4 AND ?NUCLE?
L7	1	L2 AND (ISOLAT? OR PURIF?)
L8	0	L7 AND 1970-1999/PY
L9	7	L6 AND 1970-1999/PY
L10	3	DUP REM L9 (4 DUPLICATES REMOVED)
L11	1394	ZUKER?/AU
L12	12352	CHARLES?/AU
L13	0	L11 AND L12
L14	21496	ADLER?/AU
L15	243508	JON?/AU
L16	165	L14 AND L15
L17	0	L10 AND L16
L18	11666	RYBA?/AU
L19	20814	NICK?/AU
L20	0	L18 AND L19

```
L21         89328 MUELLER?/AU
L22        122244 KEN?/AU
L23           163 L21 AND L22
L24             0 L10 AND L23

=> logoff
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